

I CLAIM:

1. A method of providing an audio user interface for a mobile terminal comprising the steps of:

- (a) receiving a plurality of messages from at least one message source, each message associated with at least one corresponding auditory icon;
- (b) prioritizing the plurality of messages to identify at least one message based on at least one context value; and
- (c) presenting the auditory icon associated with the identified message.

2. The method of claim 1, wherein each message also has at least one corresponding visual icon, and wherein the method further comprises the step of:

- (d) representing, in a display of the mobile terminal, the visual icon corresponding to the identified message.

3. The method of claim 2, wherein step (d) comprises the step of displaying the first icon using a display format that is enlarged in relation to other icons in the display.

4. The method of claim 1, wherein step (b) comprises the step of comparing at least one characteristic associated with each of the plurality of messages to at least one context value.

5. The method of claim 1, wherein step (b) comprises the step of using an artificial neural network to prioritize the plurality of messages.

6. The method of claim 1, wherein step (c) comprises the step of presenting a spatial position to the user.

7. The method of claim 1, wherein step (c) comprises the step of presenting a spatial position to the user by stereo amplitude panning.

8. The method of claim 1, wherein step (c) comprises the step of presenting a spatial position to the user by acoustic modeling and auralization techniques.

9. The method of claim 1, wherein step (c) comprises the step of presenting the auditory icon in stereophonic mode.

10. The method of claim 1, wherein step (c) comprises the step of presenting the auditory icon in monophonic mode.

11. The method of claim 1, wherein step (c) comprises the step of using text-to-speech (TTS) synthesis to present the auditory icon.

12. The method of claim 1, wherein step (c) comprises the step of streaming additional descriptive audio information about the message.

13. The method of claim 1, wherein step (b) comprises the step of ordering each received message in order of matching to the context value and step (c) comprises the step of presenting the auditory icon for each received message in accordance with the order determined in step (b).

14. The method of claim 1, wherein step (a) comprises the step of receiving the corresponding auditory icon for each received message.

15. The method of claim 1, wherein step (c) comprises the step of identifying the corresponding auditory icon with each received message.

16. A method of providing an audio user interface for a mobile terminal comprising the steps of:

- (a) receiving a plurality of messages from at least one message source, each message associated with at least one corresponding auditory icon;
- (b) identifying at least one best match message based on at least one context value; and
- (c) presenting the auditory icon associated with the identified message.

17. The method of claim 16, wherein the identified message also is associated with at least one corresponding visual icon, and wherein the method further comprises the step of:

- (d) representing, in a display of the mobile terminal, the visual icon corresponding to the identified message.

18. A computer-readable medium having computer-executable instructions for performing the steps of:

- (a) prioritizing a plurality of received messages to identify at least one message based on at least one context value, the message being associated with an auditory icon and a visual icon;
- (b) presenting the auditory icon associated with the identified message; and
- (c) representing, in a display of a mobile terminal, the visual icon associated with the identified message.

19. A method of providing a plurality of icons on a mobile terminal comprising the steps of:

- (a) receiving a plurality of messages from at least one message source, each message associated with at least one associated auditory icon and at least one associated visual icon;
- (b) prioritizing the plurality of messages in order of match to at least one context value;

- (c) representing, in a display of the mobile terminal, the visual icons associated the messages using a display format that visually prioritizes the visual icons according to match with the context value; and
- (d) presenting at least one auditory icon associated with one of the represented visual icons.

20. The method of claim 19, wherein step (c) comprises the step of representing the visual icons in at least one navigation bar.

21. The method of claim 19, wherein step (d) comprises the step of presenting an auditory icon corresponding to each represented visual icon.

- 22. The method of claim 19, further comprising the steps of:
 - (e) performing steps (a) and (b) at a subsequent point in time;
 - (f) updating the represented visual icons by representing at least one additional visual icon; and
 - (g) presenting an auditory icon corresponding to the additional visual icon.

- 23. The method of claim 19, further comprising the steps of:
 - (e) performing steps (a) and (b) at a subsequent point in time;
 - (f) updating the represented visual icons by removing on the represented visual icon; and
 - (g) presenting an auditory icon corresponding to the removed visual icon.

24. The method of claim 19, wherein step (d) comprises the step receiving an indication from a user that one of the represented visual icons has been selected and presenting the auditory icon associated with the selected visual icon.

25. The method of claim 19, wherein step (d) comprises the step of presenting a spatial position to the user.

26. The method of claim 19, wherein step (d) comprises the step of presenting a spatial position to the user by stereo amplitude panning.

27. The method of claim 19, wherein step (d) comprises the step of presenting a spatial position to the user by acoustic modeling and auralization techniques.

28. The method of claim 19, wherein step (d) comprises the step of presenting the auditory icon in stereophonic mode.

29. The method of claim 19, wherein step (d) comprises the step of presenting the auditory icon in monophonic mode.

30. The method of claim 19, wherein step (d) comprises the step of using text-to-speech (TTS) synthesis to present the auditory icon.

31. The method of claim 19, wherein step (d) comprises the step of streaming additional descriptive audio information about the message.

32. The method of claim 19, wherein step (b) comprises the step of using an artificial neural network to prioritize the plurality of messages.

33. A mobile terminal comprising:

- (a) a display capable of displaying visual icons, each visual icon having an associated auditory icon;
- (b) a user input device that permits a user of the mobile terminal to select at least one of the visual icons displayed on the display; and
- (c) an auditory user interface for presenting the associated auditory icon when the visual icon has been selected.

34. The mobile terminal of claim 33, further comprising:
- (d) a processor programmed with computer-executable instructions that, when executed, perform the steps comprising:
 - (i) prioritizing a plurality of messages based on at least one context value; and
 - (ii) displaying visual icons associated with each of the messages in order of priority as determined by the prioritizing step.

35. The mobile terminal of claim 34, wherein the prioritizing step comprises the step of comparing at least one characteristic associated with each of a plurality of messages to one or more context values that are specific to a user of the mobile terminal.

36. The mobile terminal of claim 35, wherein the displaying step comprises the step of displaying visual icons by relative size such that relative size is proportional to priority.

37. The mobile terminal of claim 35, wherein the displaying step comprises the step of displaying visual icons consecutively in order of priority.

38. The mobile terminal of claim 34, wherein the prioritizing step comprises the step of determining a proximity value associated with each message in relation to the mobile terminal.

39. The mobile terminal of claim 38, wherein the displaying step comprises the step of displaying visual icons by relative size such that relative size is proportional to proximity value.

40. The mobile terminal of claim 38, wherein the displaying step comprises the step of displaying visual icons consecutively in order of proximity value.

41. The mobile terminal of claim 33, further comprising:
 - (d) means for prioritizing a plurality of messages based on at least one context value; and
 - (e) means for displaying visual icons associated with each of the messages in order of priority as determined by the prioritizing step.

42. A mobile device comprising in combination:
 - (a) a display comprising a plurality of user-selectable icons arranged in an order determined by a degree of matching between information corresponding to the respective ones of the first plurality of visual icons and at least one context value; and
 - (b) a sound generator providing an audio icon associated with at least one of the plurality of user-selectable icons.

43. The mobile device of claim 42, wherein the plurality of user-selectable icons comprises a set of user-selectable icons arranged in a navigation bar.

44. The mobile device of claim 43, wherein at least one of the visual icons in the set is displayed in an enlarged format relative to others of the first set of icons.

45. The mobile device of claim 42, wherein the sound generator provides the audio icon in response to a user selecting one of the plurality of user-selectable visual icons.

46. The mobile device of claim 42, wherein the sound generator provides the audio icons associated with each of the plurality of user-selectable visual icons in order of priority.

47. The mobile device of claim 42, wherein the sound generator provides the audio icons associated with each of the plurality of user-selectable visual icons in order of priority.

48. A mobile terminal comprising:
- (a) a display capable of displaying visual icons, each visual icon having an associated auditory icon;
 - (b) a user input device that permits a user of the mobile terminal to select at least one of the visual icons displayed on the display; and
 - (c) means for presenting the associated auditory icon when the visual icon has been selected.